

the true orbit. It follows that "we must study the different species as constant things,"¹ and that this is a more "dignified" occupation for a "naturalist than the accumulation of doubtful cases in favour of the non-permanence of species."² He agrees with Cuvier in rejecting the older idea of the "échelle des êtres,"³ and he praises the sagacity of Linnæus, who suggests that the vegetable kingdom resembles a geographical chart,⁴—an idea which, in the hands of several French and German botanists, has become a fruitful conception.

In De Candolle we meet with a repeated accentuation of the recurring symmetry of form, of the existence of definite primitive types, in the vegetable kingdom. Simultaneously with him there was labouring another thinker and keen observer of nature, who was primarily struck by the resemblance exhibited in the different parts or organs of one and the same plant, and searched for the type or plan on which they were modelled. He introduced into the vocabulary of scientific language the expression "metamorphosis of plants." It was Goethe the poet who, in 1790, published under this title his first contribution to morphological science. In subsequent publications and essays, covering the last forty

¹ "Théorie élémentaire," p. 195.

² Ibid. ³ Ibid., p. 230.

⁴ "Linné a le premier, avec sa sagacité ordinaire, comparé le règne végétal à une carte géographique ; cette métaphore, indiquée dans son livre par un seul mot, a été développée ensuite par Giseke, Batsch, Bernardin de Saint-Pierre, L'Héritier, Petit-Thouars, &c. Et quoi qu'on ne doive la prendre que pour une simple image, cette image

est tellement juste, tellement féconde en conséquences utiles, qu'il est peut-être convenable d'entrer dans quelques détails ultérieurs. Je suppose pour un moment cette carte exécutée ; les classes répondent aux parties du monde, les familles aux royaumes, les tribus aux provinces, les genres aux cantons et les espèces aux villes ou villages," &c. (Théor. élém., p. 231).

36.
Goethe's
metamor-
phosis.